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LOUISIANA Conservationist

March/April 1987

J. Burton Angelle Sr., *Secretary*

TO THE BEST OF MY KNOWLEDGE, this is the first time in the fifty plus years of its existence that an entire issue of the *Louisiana Conservationist* has been dedicated to a single topic.

The object of this unprecedented attention is the 50th anniversary of the passage of the Federal Aid in Wildlife Restoration Act, better known simply as the Pittman-Robertson Act after it two sponsors, Senator Key Pittman of Nevada and Representative Willis Robertson of Virginia.

The importance of this piece of legislation is hard to overstate. Its impact has been astronomical, not only in terms of habitat preservation and wildlife restoration, but also on the very science of wildlife management itself. These things will be quite clear as you read on.

While the successes of Pittman-Robertson will become very apparent, what may be less apparent, but something that is every bit as important, is the human factor.

You will read how Pittman-Robertson "bucks" were transformed into Louisiana bucks in our successful deer restocking program. We have deer in parts of Louisiana where they never before existed in numbers and most likely have more deer now than ever before.

The transformation of those Pittman-Robertson bucks into the deer herds so abundant today was accomplished by what I term the human factor in the equation. To get a full appreciation of this side of the equation you have to read between the lines.

Each one of the 3,000 plus deer involved in the restocking effort represented a lot of work on someone's part. Deal with just a few very excited full grown deer and you can begin to get a feeling of the enormousness of this effort.

The same can be said for efforts to restock the wild turkey, manage our waterfowl populations and restore and enhance precious tracts of rapidly disappearing quality wildlife habitat.

The statement "the cannon net had been developed and proved to be far superior to any previous method of trapping wild turkeys" concisely, yet very aptly relates a turning point in the restoration of wild turkey populations. It does not relate, however, the skill and effort involved in first locating suitable flocks, hauling, rigging and setting the heavy, cumbersome net and then spending countless cold and weary early mornings remaining silent and dead still in a nearby blind.

Likewise, just stating that aerial surveys continue to be viable waterfowl monitoring tools doesn't give any indication of what it's like to spend eight hours at a time buzzing along pre-planned routes close to the ground at 100 plus miles per hour in a tight, bumpy airplane picking out different species of waterfowl. And shame on you if you happen to wake up with a headache that morning or the weather's a little rough and you get airsick an hour or so out.

Such things as these, while hard work, do at least have their moments of excitement. When it comes to habitat restoration and enhancement, this is most often not the case. When I speak of tasks like thinning timber, planting seedlings, maintaining levees and dikes, building all-terrain-vehicle bridges and replacing boundary signs, what image comes to mind? If it's just plain hard work, then you're beginning to get the drift of what I call the people factor.

Encapsulated and stripped to its bare bones, what I'm trying to relate is that while credit for the accomplishments of a half century of Pittman-Robertson belongs to the visionaries who begat the program and the sportsmen who have over the years supported it, the lions share must rightly go to those men and women, both past and present, who have turned a wildlife restoration vision into reality.

They are the "people factor" and Pittman-Robertson's success is their success. I applaud them.

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Conservationist

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Back Cover *"Whitetail in Velvet" by Bill Ford.*

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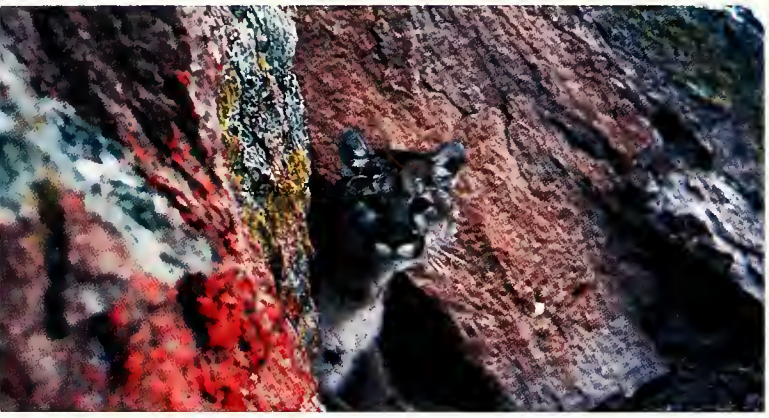


Photograph by Larry Moats, U.S. Fish and Wildlife

Photograph by Bill Ford

A Half Century of Restoration

By Phil Million
Chief, Public Affairs
U.S. Fish and Wildlife Service

In the end, it was those who enjoyed hunting for sport who banded together to save wildlife.

IMAGINE, FOR A MOMENT, AN AMERICA lacking many of its most spectacular, and popular, wildlife species. Imagine no white-tailed deer in all the Eastern woodlands, no wood ducks in all the Southern swamps, no pronghorn antelope on the vast Western plains, no bighorn sheep in the Southwestern deserts, no black bears anywhere to give campers a thrill.

Fifty years ago, that's the way things were heading. These native American animals, and many others, were hanging on only in the most isolated places, their numbers and ranges drastically reduced after 300 years during which American settlers had harvested timber, drained marshes, and plowed and fenced the plains without much thought for the effects on wildlife. Many birds and animals had been decimated by years of uncontrolled hunting to supply commercial markets with fur and feathers, meat, and oil.

In the end, it was those who enjoyed hunting for sport who banded together to save wildlife. Alarmed by the decline of game species, they organized and lobbied for effective conservation measures. And they did something more–they put their money behind their convictions.

Largely because of hunters' taxes and fees, white-tailed deer have increased from less than a half million in 1900 to more than 14 million today. The 1907 count of 41,000 elk south of Canada has burgeoned to half a million. The wild turkey can be found in 43 states, and the pronghorn antelope, desert bighorn sheep, black bear, and wood duck are surviving nicely with no fear of extinction.

These and other wildlife species, ranging from the stately caribou to the homely kangaroo rat, have survived in the face of increasing human population, habitat destruction, and an astonishing variety of chemical pollutants–in large part because of a little-known program through which hunters have funneled over $1.5 billion into wildlife restoration over the past 50 years.

The mechanism by which all these good things have been accomplished is a law, formally known as the

Federal Aid in Wildlife Restoration Act, but dubbed the "Pittman-Robertson" or P-R Act after its two sponsors, Senator Key Pittman of Nevada and Representative (later Senator) Willis Robertson of Virginia. P-R was proposed by a coalition of outdoors lovers and conservationists in 1936, and signed into law by President Franklin Roosevelt on September 2, 1937. Looking back over the nearly 50-year lifespan of this law, the argument can be made that Pittman-Robertson has been responsible for the restoration of more wildlife species than any other piece of legislation in the history of wildlife conservation.

An Inauspicious Time

The mid-1930's were an inauspicious time for any proposal that people take a new interest in wild animals. The Depression following the stock market crash of 1929 left at least one non-farm worker in every eight unemployed, and 34 million men, women, and children with no income whatever.

Against this unpromising backdrop, Jay N. "Ding" Darling, a nationally syndicated cartoonist for the Des Moines Register and director of the Bureau of Biological Survey (forerunner of today's U. S. Fish and Wildlife Service), convened the first North American Wildlife and Natural Resources Conference in 1936. An ardent conservationist, Darling advocated a "wildlife policy" that would declare the survival of game animals and birds to be in the national interest, and would place federal and state efforts on a scientific basis. While many Americans now take for granted the idea of scientific wildlife management, it was a brand new notion in 1933 when conservation pioneer Aldo Leopold published his major work on the topic, *Game Management*. The idea that wildlife species could be aided through scientific management principles gained swift acceptance in the late 1930's. Ding Darling made an important first step in advancing this idea when he convinced executives from the Du Pont, Hercules, and Remington Arms companies to help fund a program of cooperative research units, located at land-grant universities. The units would provide graduate-level training for wildlife scientists and conduct much-needed research on wildlife.

But wildlife conservation needed more help–and especially, more money. A concrete idea for providing that money emerged from the second North American Conference, held in St. Louis in March 1937. Actually it was an old idea, brushed off and re-designed to suit the temper of the times: to devote the 10 percent (later 11 percent) excise tax on sporting arms and ammunition, which then went into the federal government's General Fund, exclusively to wildlife conservation. It was, in effect, an idea that would become more popular in our own time–a "user-pay" program, with hunters footing the bill to conserve the wildlife they enjoyed. The obstacle was getting such legislation passed in a time of financial crisis.

The obstacle was surmounted by Carl Shoemaker, a one-time Ohio lawyer, Oregon newspaper publisher, and state fish and game director who had been appointed special investigator for the U.S. Senate Special Committee on Conservation of Wildlife Resources. Returning to Washington from the St. Louis conference, Shoemaker drafted his excise tax proposal, won immediate support from Du Pont, Federal Cartridge, and Remington Arms, and then went prospecting for congressional sponsors. In June 1937, Senator Pittman and Congressman Robertson introduced identical bills into the Senate and House, and the law was soon passed.

A State-Federal Partnership

So, on September 2, 1937, President Roosevelt signed a law that:

> *Apportioned federal firearms and ammunition taxes to the states on a matching basis based on the number of hunting licenses sold, up to $3 federal for every $1 state;*
>
> *Prohibited the use of these federal revenues for any purpose other than wildlife conservation; and*
>
> *Prohibited the states from using their hunters' license fees for any purpose other than supporting the state fish and game agency.*

This last proviso, added by Congressmen Robertson, eliminated the possibility that states might simply substitute federal funds for their own wildlife expenditures, and so cut budgets. His foresight has meant hundreds of millions of dollars for conservation since 1937.

The following year, the Bureau of Biological Survey spelled out the three types of state projects that would be eligible for P-R funds:

> *The purchase of land for wildlife rehabilitation purposes;*
>
> *The development of land to make it more suitable for wild mammals and birds; and*
>
> *Research to solve "problems that stand in the way of wildlife restoration."*

By the end of 1938, 43 of the 48 states had passed laws reserving hunting license fees for wildlife management purposes, thus qualifying them to receive P-R funds. Pittman-Robertson was on its way.

What P-R Hath Wrought

There were some bumps in the road ahead. America's entry into World War II dispatched most of its hunters to far corners of the globe, and the military monopoly on new guns and ammunition chopped P-R funds to virtually nothing. Even after the war, when the number of licensed hunters jumped from 9.8 million to 12 million almost overnight, funds were slow in reaching the states until Congress in 1950 agreed to transfer the funds automatically each year.

But despite these problems, P-R has been a roaring success. The program has provided more than $1.5 billion to the states for wildlife restoration since 1937.

Yet of all P-R's successes, the most important is the least visible and quantifiable: the creation of a science of wildlife management.

A Training Requirement

Before passage of Pittman-Robertson, the shakily financed state fish and game agencies concentrated almost exclusively on law enforcement, predator control, the maintenance of refuges, and raising game birds in pens for release during the hunting season. Fish and game agency executives were often political appointees with no special training or expertise for the job, and turnover among them led to policies that were often reversed by their successors. In the absence of scientific knowledge and communication among agencies, one state might launch an "experiment" that had already failed in another. Science could provide physical descriptions of animals, but little information on their behavior or habitat needs.

Fortunately, Biological Survey officials inserted a policy that was not required by the P-R law itself, but was well within the federal agency's authority: namely, that any wildlife personnel hired by state agencies with P-R funds must be "trained and competent to perform their duties."

It is almost impossible to overstate the value of this aspect of the P-R program. State agencies began to hire graduates of Ding Darling's cooperative research units. Armed with new knowledge and newly developed techniques, these scientists began to succeed in reestablishing populations of white-tailed deer, wild turkey,

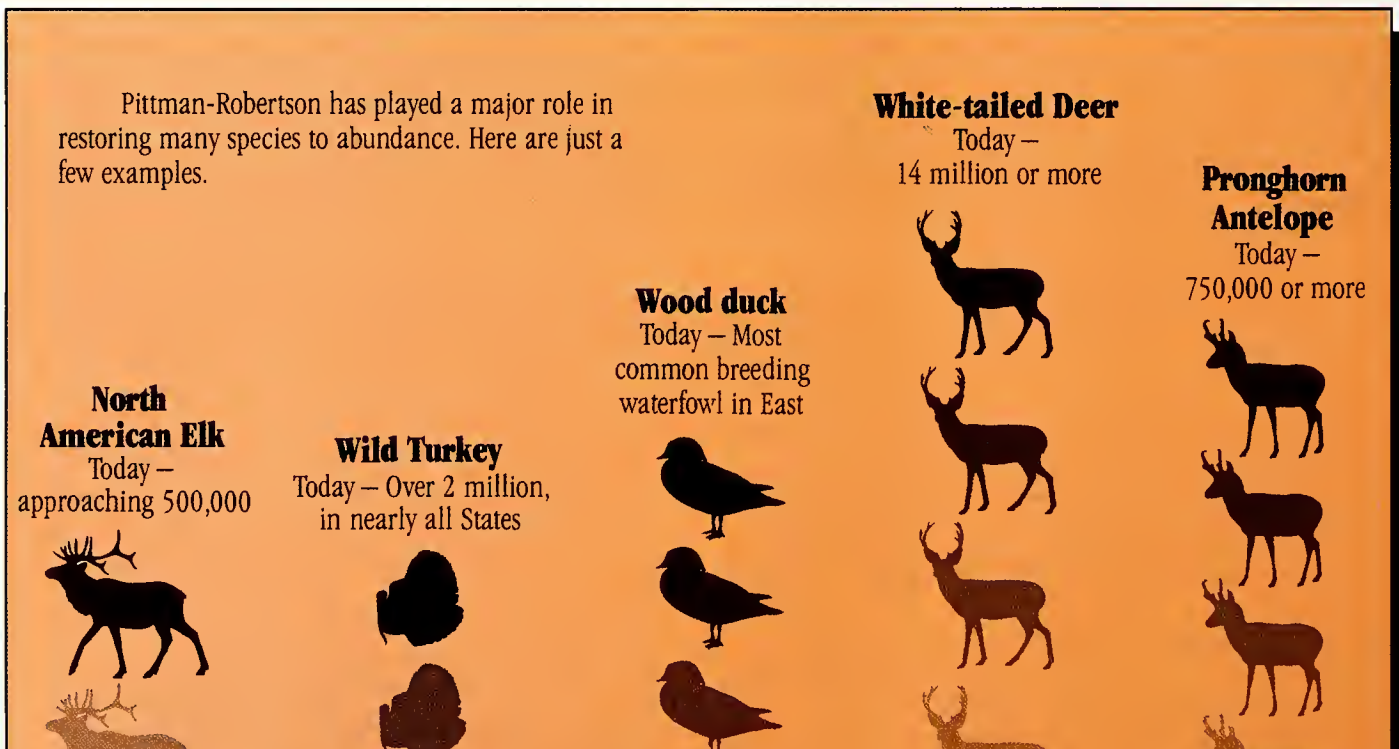


Chart courtesy U.S. Fish & Wildlife Service

pronghorn antelope, and other species. And as scientists learned more about wildlife and communicated their findings to the public, public support for wildlife conservation increased.

P-R also had unexpected benefits for nongame wildlife such as songbirds, small mammals, reptiles, and amphibians. The habitat set aside under P-R for game species also sheltered these nongame animals. And the new cadre of wildlife biologists also began turning their attention to these less-noticed creatures. In recent years, many states have developed special conservation programs for nongame wildlife.

Summary And Forecast

What began as a federal-state partnership to conserve game species has evolved into a highly sophisticated, science-based program to keep American wildlife populations of all kinds in a healthy balance. Not only sportsmen have benefited. So have millions of Americans who have no interest in hunting. Roughly 70 percent of visitors using lands purchased with P-R funds are not hunting; they are birdwatching, taking photographs, hiking, camping, or simply enjoying nature.

Our national interest in wildlife has produced substantial economic benefits. In 1980, according to a Fish and Wildlife Service survey, hunters spent an estimated $8.5 billion a year on equipment, hunting fees, and travel, and those who enjoy birdwatching, feeding birds, photographing wildlife, and related outdoor activities are estimated to spend an additional $14.7 billion for equipment and travel. Much of this spending–and the accompanying creation of jobs–is an outgrowth of the Pittman-Robertson Act, accomplished at no cost to the general taxpayer.

Annual P-R revenues, only $1 million in 1938, have climbed steadily since World War II, and hit $120 million in 1985. While the U.S. population has nearly doubled since 1937, the number of licensed hunters has tripled, providing a steady flow of P-R funds for the continuing work of wildlife conservation. In addition, the tax on sporting arms and ammunition has been augmented since 1970 by a 10 percent tax on handguns, sponsored by Representative John Dingell of Michigan, and since 1972 by an 11 percent tax on archery equipment, sponsored by Representative George Goodling of Pennsylvania; both amendments were signed by President Nixon.

Despite the great diversity and extent of P-R's accomplishments, America's wildife will face many problems over the next 50 years. Wetlands continue to be drained at the rate of nearly half a million acres a year. The change from the family farm to single-crop agribusiness has reduced habitat diversity for wildlife. In some parts of the country, increasing human needs for water can affect its availability for fish and wildlife. These and other challenges make the future for wildife far from secure.

The P-R program can continue to help wildlife thrive, as long as Americans are willing to continue the spirit born in the depths of the Great Depression–that saving our wildlife heritage is well worth the price.

Louisiana's Share

You don't have to hunt or fish to justify buying a license. Such a purchase serves to "up the ante" for the state's entire conservation effort.

Sale of 396,490 hunting licenses in 1985–the basis for determining the federal allocation–means that Louisiana's share of this year's Pittman-Robertson fund will total $2,601,889.

The Louisiana Department of Wildlife and Fisheries will match the P-R funds with its own contribution of $865,671.

From its inception in 1937 until 1986, the P-R program has provided Louisiana with $28,975,658 in sportsman-generated dollars, all dedicated to enhancing the state's wildlife resources.

With the 1987 figure of $2,601,889 added in, the grand total of P-R participation to date stands at $31,577,547.

Tommy Prickett, LDWF's Pittman-Robertson coordinator, works with the U.S. Fish and Wildlife Service to insure that P-R projects are carried out in a professional and timely fashion.

Concerned that wildlife management in Louisiana be maintained at its current high level, Prickett says:

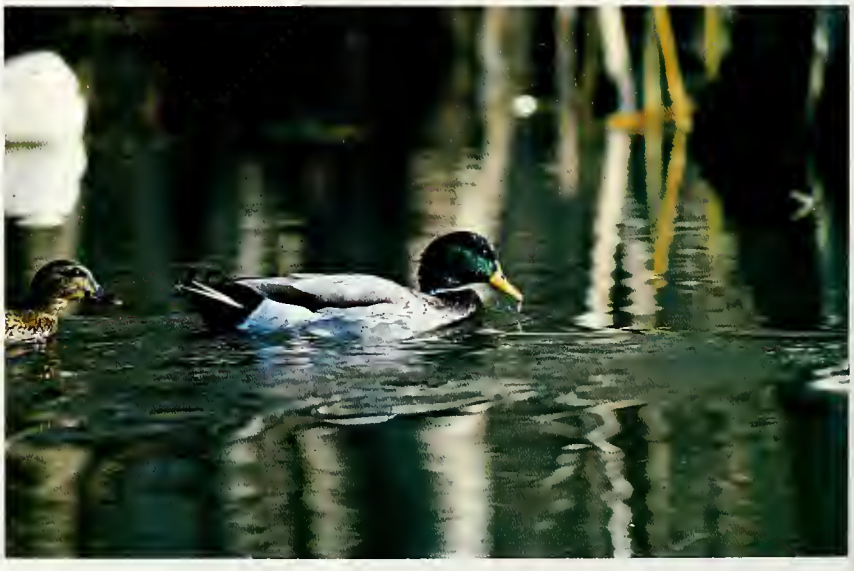
"It takes money to conduct wildlife research and to provide for the million-acre wildlife management area system enjoyed by the citizens of Louisiana.

"If the day comes when we cannot put up the matching state dollars, Louisiana's share of Pittman-Robertson will be given to other states. I hope that wildlife continues to be important enough to Louisiana residents to guarantee proper funding at the state level.

"There is no doubt that Pittman-Robertson will do its part."

Year	*La. Totals*	*National Totals*
1937-1971	$6,974,540.14	$417,611,125.45
1972	648,366.94	34,455,000.00
1973	765,592.62	41,045,000.00
1974	887,714.94	47,385,000.00
1975	990,227.92	53,470,000.00
1976	1,084,564.17	58,600,000.00
1977	1,536,407.00	84,400,000.00
1978	1,164,273.00	62,900,000.00
1979	1,570,589.00	82,200,000.00
1980	1,688,270.49	89,000,000.00
1981	1,615,753.00	83,394,000.00
1982	2,316,438.00	116,960,000.00
1983	2,155,101.00	107,060,000.00
1984	1,786,844.00	88,450,000.00
1985	1,637,712.00	79,099,600.00
1986	2,153,264.00	107,471,100.00
Totals	**$28,975,658.22**	**$1,553,500,825.45**

Photograph by Lloyd Poissenot



Sportsmen Create a Paradise

By Sara Ann Harris

Reported by:
Louis Brunett, *Development Project Leader*
Robert Helm, *Waterfowl Study Leader*
Joe L. Herring, *Assistant Secretary*
Mike Olinde, *Upland Game Section Head*
Tommy Prickett, *Pittman-Robertson Coordinator*
Larry Soileau, *Research Leader*
Blue Watson, *Environmental Studies Section Head*

The true wisdom of the act is embodied in the stipulations that mandate exclusive use of the fund for wildlife restoration.

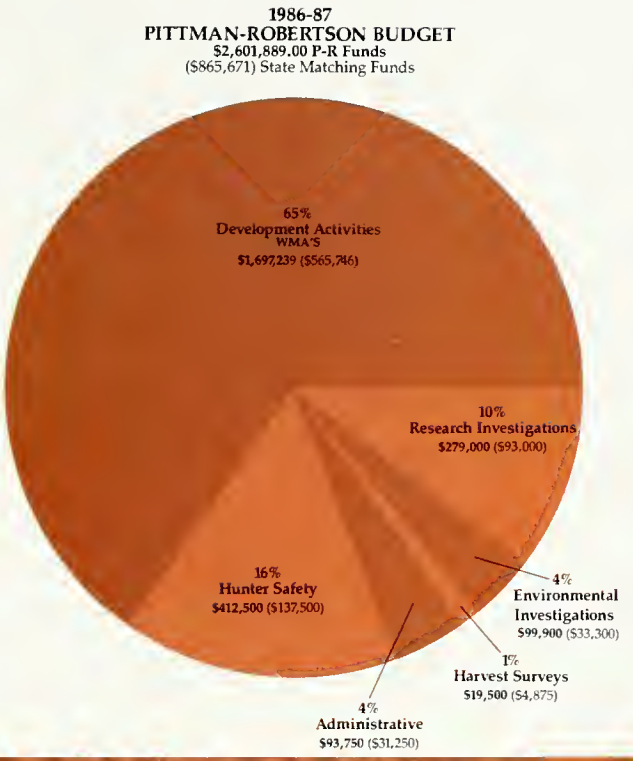
FOLLOWING THE TURN OF THE CENTURY, Louisiana, like the rest of the country, was suffering from critically depleted wildlife resources. The sprawl of the state's citizenry was soaking up previously undisturbed wild land. With the beginnings of a technological boom, agriculture was exploding as an industry. Ever-widening acreage was being cultivated. Plus, throughout history recreational and commercial hunting and trapping had gone unchecked.

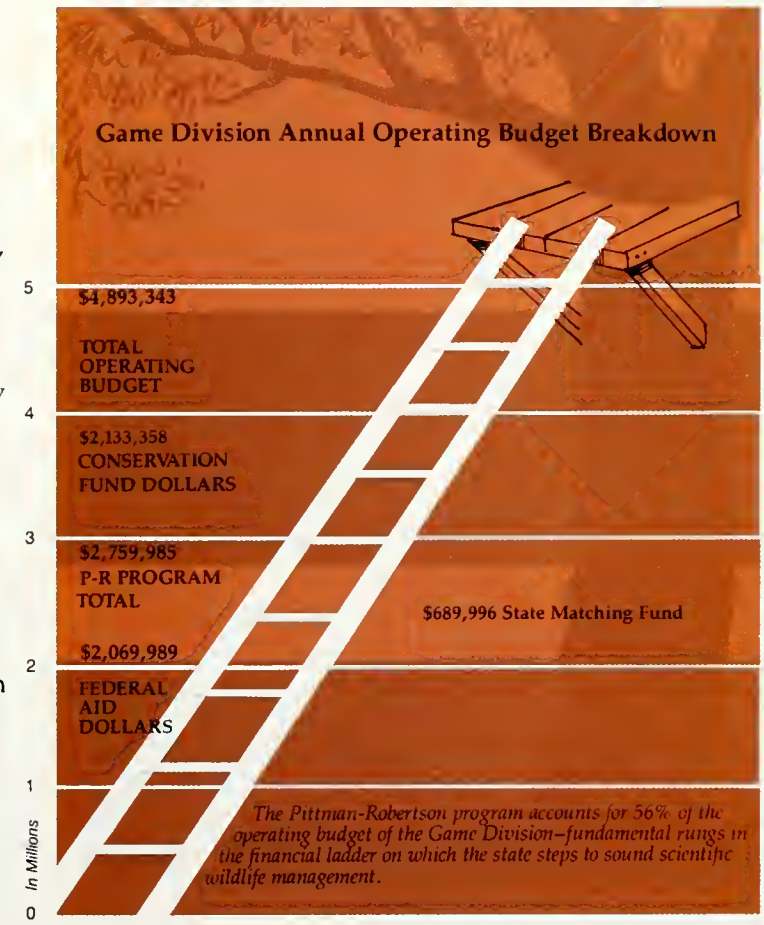
Louisianans welcomed the Wildlife Restoration Act sponsored by the sportsmen-conservationists of the time and signed by Franklin D. Roosevelt in 1937. The Pittman-Robertson Program (P-R) as it was commonly referred to was to account for the reestablishment and productivity of the dwindling wildlife in Louisiana and the needed protection of precious natural areas.

The funding for Louisiana's many successful programs is shouldered entirely by sportsmen. Under the Pittman-Robertson Program, they pay an excise tax on all firearms and some sporting equipment which is routed through the U. S. Fish and Wildlife Service and back to individual states. For every $3 of federal aid, the state is required to put up $1 garnered in large part from hunting license fees.

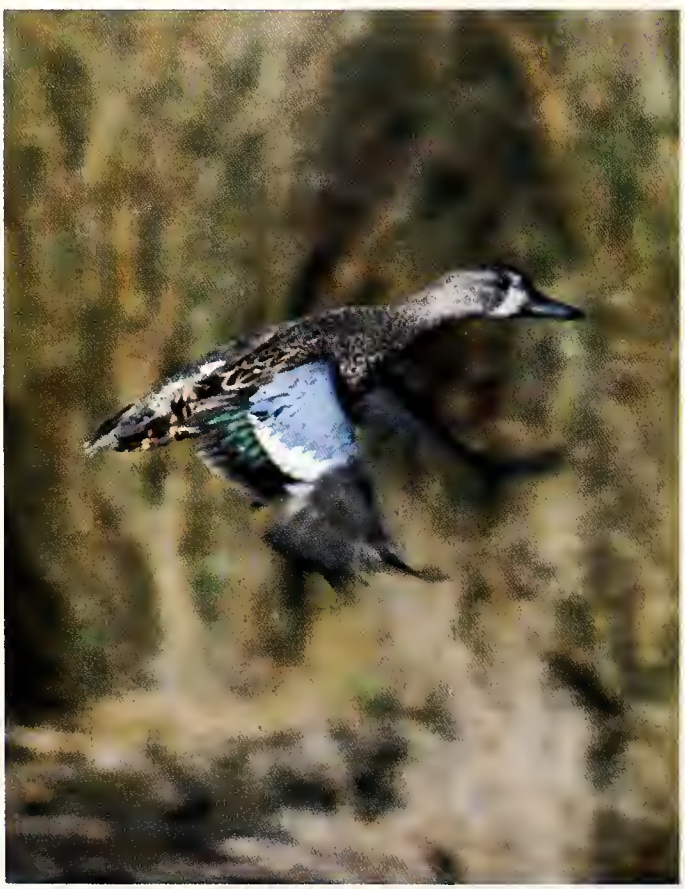
Wildlife biologist Joe L. Herring was hired by the Louisiana Wildlife and Fisheries Commission in the early '50s and has held the position of assistant secretary since 1984. The true wisdom of P-R, Herring pointed out, is embodied in the stipulations that mandate exclusive use of that fund for wildlife restoration. State legislatures would no longer be able to divert wildlife money for other purposes. With this steady and reliable financial backing, wildlife programs for the first time enjoyed stability.

The Wildlife Restoration Act funding has always been divided between Research (the collection of data) and Development (the restoration of wildlife habitat). And in 1971 an apportionment was developed for a Hunter Education Program. As a 50-year Pittman-Robertson commemorative, this article highlights some of those Louisiana projects which have most successfully contributed to managing the state's natural resources. Evidence of a job well done – in 1958 by legislative decision Louisiana was to be credited with the well earned title of Sportsman's Paradise.





P-R funded aerial surveys are vital waterfowl monitoring to



Blue-winged teal

Photograph by Lloyd Poissenot

Research

As research leader, Larry Soileau oversees all of the P-R research projects: deer, turkey, waterfowl and upland game (rabbit, squirrel, quail, woodcock and pheasant). In addition he is the mourning dove study leader. (See other articles in this issue for the story of the restocking of whitetails and wild turkey. Their once sparse populations have been replenished, in the case of deer in every parish in the state.) Soileau explained, "Our work involves surveys and inventories of wildlife populations and the habitat they occupy. We count what's there basically. We have a long term commitment. And we are a repository for the records. We try to do the jobs that require comparison information from year to year. Like the waterfowl aerial surveys. There's a perfect example. It's important for us to know, for instance, if we have more ducks now in Louisiana than we did in the 1950s or than we did last year. The hunters are very interested in that. And as waterfowl and resource managers it's important that we know what our populations are doing."

Louisiana is second to none in the nation in importance to wintering waterfowl. The major P-R research projects that substantiated this ranking are impressive indeed. In the '50s, the department was hard at work on a groundbreaking inquiry which was produced by Morton Smith and entitled the *Louisiana Waterfowl Population Study.* Relying whenever feasible on aerial surveys, the research team headed by Richard Yancey and

including J.B. Kidd, presently assistant chief of the Game Division, and Robert Beter, now supervisor of the New Orleans district, developed a data base by determining, for instance, arrival and departure dates of each species, numerically important species, and the location of prized wetlands and agricultural fields. The twelve year investigation "revealed that Louisiana was a major wintering area for waterfowl of the Mississippi Flyway" with an estimated 4,500,000 ducks, 550,000 geese and 470,000 coots in 1961.

Current Waterfowl Study Leader Robert Helm in a 1985 issue of the *Louisiana Conservationist* explained that the P-R funded aerial surveys continue to be used as viable monitoring tools. They have been "altered since the '50s but the current procedures have been in place since 1968. The information (from aerial surveys) aids the department in keeping track of waterfowl distribution and wetlands important to these popular birds. Aerial counts are conducted 10 times from September to February and include the entire coastal area and also Catahoula Lake." In a recent interview with Helm, following a morning flight in the marsh of southwest Louisiana, he explained that " a lot of these surveys are the basis for management plans, for instance the special nine day teal season in September. The season was set in the mid-'60s and was based on aerial surveys that demonstrated that blue wing teal migrated through this state and through the Gulf Coast states during the month of September." Soileau, who worked directly with the project, added, "A banding program demonstrated that they (blue wing teal) were very lightly harvested. They left the Canadian prairies after nesting, flying through the United States. They were virtually unharvested in the regular season which began even in the most northern states after the first of October. So they were not exposed to hunting at all. Armed with this information, biologists from Louisiana went to Washington and requested that a special season for the taking of teal be allowed during September ... and were successful. This is a good example of the utilization of information gathered which allowed us to provide hunters with additional recreation which in no way jeopardized the blue wing teal population."

Another migratory game bird important to Louisiana is the mourning dove, which join the state's resident doves in the winter months. Federal aid funds provided the impetus for dove research in the southeastern states beginning in the early 1950s. This early research effort demonstrated that dove hunting recreation could be increased substantially without affecting the size of the dove population.

Dove Study Leader Larry Soileau gave a concise and insightful explanation of this major dove research: "In the early 1950s, we had an eight bird bag limit and a 30 day season. Many people believed at that time that the mourning dove was a short lived bird with a high natural mortality and that we could probably allow more hunting of the resource. So the first large cooperative program (with other state agencies) funded with federal aid funds was begun at that time. Large numbers of doves were banded and migrational routes were determined. It was determined also that the mortality rate of doves was extremely high and that the impact of hunting was relatively insignificant upon these dove populations. As a result of that study the season was gradually relaxed and the season length increased by five day increments from the 30-day season to the present 70-day season. The bag limit was increased from eight birds to the present 12 bird limit."

"It was determined also that the mortality rate of doves was extremely high and that the impact of hunting was relatively insignificant upon these dove populations."

Photograph by Mark Saltz

Mourning dove

Presently, the size of the dove breeding population is monitored annually by survey. Wildlife staff methodically record the number of dove calls along selectively plotted routes to affirm that their numbers are remaining stable in Louisiana and throughout the U.S.

Photograph by Bill Ford

Imported wild pheasants are banded (top) prior to their release (bottom) on specially selected areas in southwestern Louisiana.

The pheasant has been slow to adapt to Louisiana, but Olinde feels optimistic about the most recent release.

The Upland Game Section, now headed by Mike Olinde, must attend to the well being of our small game animals, like quail, woodcock, rabbit, squirrel, and pheasant. Research and management efforts on these game held strong for a couple of decades beginning with the '40s. Then there was a lull. Olinde added "People are getting concerned about small game again. I think you're seeing a renewed interest in small game research across the South. There are a couple of steering committees established by the directors of the Southeastern Association of Fish and Wildlife Agencies to put a lot of emphasis on small game research, particularly on quail, but also on squirrels, rabbits and and others that have taken the back seat for 10 or 15 years. You can see this renewed interest in a southeast wide research program."

Using wild birds from Texas, Idaho and California, the department conducts pheasant releases in the grasslands and agricultural areas of southwestern Louisiana. Then, listening for their loud two-syllable call followed by muffled rapid wing beats, biologists systematically count calls. This exotic uses its small rounded wings for short distance flight only. The pheasant has been slow to adapt to Louisiana, but Olinde feels optimistic about the most recent release: "That last site really looks good. It just seemed like it exploded last year." To continue the state's stocking effort of this colorful game bird, Olinde and his staff are experimenting to find the most effective and cost efficient wild pheasant capture technique.

The American woodcock, a prized game bird known to the French as becasse, ranges throughout the state in thickets and brambles of woodlands. Under cover by day, woodcock feed by night on earthworms in the moist fertile soils of adjoining pastures. Anatomically a shorebird, the woodcock has special muscles to open the flexible tip of a long bill to probe for food. "The Atchafalaya Basin is thought to hold probably 75% of the wintering birds in the Central Management Unit for woodcock," said Olinde.

"One of the problems (with woodcock) is that their numbers are declining in the Eastern Management Unit," Olinde continued. "We have been interested in what effect hunting in February has on birds. Woodcock's peak breeding is in late March to mid-April, but you *may* pick up a nesting bird in February. We've conducted some research on follicle size and testis size in February. We're trying to take this through the whole hunting season so we can see when and if the development that is thought to indicate the onset of nesting season takes place while the woodcocks are in Louisiana. Our initial studies show basically that less than 3%

The chunky, reddish brown bobwhite, also referred to as a quail, is Louisiana's upland game bird par excellence.

of the birds are near any type of reproductive stage during our hunting season." Olinde concluded that hunting season in Louisiana does not appear to pose a threat to the birds' reproduction but, nonetheless, the Upland Game Section is expanding the study in the event that new findings would be beneficial to other states in this migratory bird's flyway.

The chunky, reddish brown bobwhite, also referred to as a quail, is Louisiana's upland game bird par excellence. As many outdoorsmen know, its call sounds surprisingly similar to the phrase "poor bob white." Olinde describes quail as an edge species because of its preference for border areas along agricultural plots and piney woods.

Biologists arrive at bobwhite population indices using such measures as the wing survey and the whistling count. They alert avid quail hunters of the need for wings from and pertinent information about their take. With these, biologists can then record age and sex data and reach conclusions about the production across the state. Olinde explained the value of the whistling counts: "We have established 50 routes now across the state for quail. Tracking these and stopping regularly to count calls, the staff can get an index of what our fall population is. With this figure in hand, if necessary, we can make suggestions for changes in regulations."

In the most extensive quail project currently underway, Olinde and his staff are trying to determine how to provide quail with the largest supply of their most preferred foods: "Certain management techniques have long been recognized in quail management: prescribed burning, fallow discing and planting food plots. An awful lot of the work (on the effectiveness of these techniques) was done in other states. We're taking some of those projects and applying them to Louisiana, because we have a totally different climate and totally different soils than other states. So the question is does our vegetation respond the same (to these techniques) given our climate factors."

P-R also funds the research conducted by the Environmental Studies Section. Fish and wildlife information is essential to sound planning of land and water management projects and to proper decision making in various state and federal programs. The Environmental Studies Section headed by Blue Watson using the technical expertise of the department at large reports to government project planners with such information. Most fundamentally, as defined by the constitution, the department is repository of information on the state's natural elements and therefore responsible to acquire and maintain such data.

American woodcock *Photograph by Lloyd Poissenot*

Bobwhite *Photograph by Anne Faust*

Planting food plots

Prescribed burning

Development

The restoration of habitat, that most basic of requirements for wildlife survival, historically has had a place of utmost importance in the P-R program and is generally referred to as Development. In the Pelican state, a land development, maintenance and management program was sparked by P-R. Though the P-R fund has not been tapped for the actual acquisition of land, the program has funded the development of acres of *all* of the state's ecological areas for optimum support of wildlife: hardwood bottomland, pine forest, marsh, prairie, and cypress-tupelo swamp.

The first projects took the shape of mutual agreements with the U.S. Forest Service to manage federal lands. Since then thousands of acres have been revitalized via leases with and donations from private and corporate landowners and other government agencies. In 1948 the department signed its first lease, encompassing 18,600 acres in central Louisiana in Allen Parish named West Bay Wildlife Management Area. With its first actual purchase in 1960, the department acquired Russell Sage WMA, a 17,280-acre hardwood tract near Monroe in the nutrient rich Mississippi River alluvial plain. This purchase marked the beginning of an agressive effort to spare our hardwood forests from expansive leveling for agricultural purposes. To date the department has purchased outright some 335,000 acres, most of which is precious hardwoods.

The total acreage of free-access public land developed and managed with P-R funds for the cover and feeding needs of multifarious species figures at approximately 850,000 acres. This acreage breaks down into thirty four wildlife management areas. Wildlife biologist Louis Brunett, charged with the task since 1967 of overseeing the Development Program, is armed with 65% of the federal apportionment and a legion of 100 employees. Biologists, wildlife specialists and maintenance and heavy equipment teams are engaged in a wide range of routine and specialized jobs that are determined by the ecological area and the needs of wildlife on that particular spread of land.

Construction of ATV bridges and maintaining roads

Selective timber thinning

Planting mast producing t

Some jobs like trapping and releasing wild turkeys, conducting managed hunts and bag checks relate to assessing and improving population numbers. Others provide preferred foods for wildlife: herbaceous seeding, replenishing deer salt licks, timber thinning and prescribed burning. The management of a water source is also critical to maintaining a sound ecological balance. Jobs like maintenance of levees, dykes, canals or earthen dams, and construction of water control structures address this issue. Still other plans are the routine tasks that are associated with access and people management: construction of all-terrain-vehicle bridges and boat ramps, maintenance of vehicular roads and replacement of boundary signs. Collectively this work helps restore wild animals and the natural elements which impact them. It also enhances the outdoor sports which fulfill important management roles.

Reviewing this year's Project Agreement, Brunett, who in 1975 was awarded Professional Conservationist of the Year by the Louisiana Wildlife Federation for habitat work, concluded that development projects impacting Louisiana's natural heritage and our citizens' enjoyment of that heritage are being completed at a minimal cost indeed. From his perspective, the state is providing quality recreational opportunities to the hunters, trappers, fishermen, crabbers, shrimpers and crawfishers who frequent the WMAs. These outdoor enthusiasts plus the campers, boaters, hang gliders, bird watchers, horse back riders, hikers and berry pickers make up entries on the Recreational Man Days report that totals user visits at one million plus annually. Brunett pointed out that with a development budget of about $2.5 million the state is providing rich and varied opportunities to its citizens at a small cost.

Photograph by Lloyd Poissenot

Hunter Safety

P-R WAS ORIGINALLY INSTITUTED out of an ethical responsibility to this country's natural resources. Likewise, sportsmen embraced the responsibility to promote safety in the woods while harvesting these resources. Federal and state agencies in the '40s were convinced that hunting accidents could be reduced if hunters were better trained in firearm skills and better prepared for the possible dangers in the hunting situation. The National Rifle Association (NRA) with its wide membership spearheaded the first nationwide safety program. The resulting lives saved led to an amendment of the Wildlife Restoration Act in 1971. Funds were apportioned for a specific Firearms and Hunter Education Program.

With a single staff member already working on safety within the Education Section, the Louisiana department prepared to go statewide. Thousands of students were to be trained through the public school system, universities and summer youth camps and volunteer instructors were to be accredited via regional workshops. Other goals of the expanding program included reducing firearms accidents, constructing public firearms ranges and promoting hunter education using graphic and electronic media.

Because of an increased demand the department later supplemented its efforts through Teaching Teachers. Hunter safety was integrated into the classrooms of our public school system. Physical education instructors covered archery and firearms in their regular coursework and science teachers included units on conservation. Today, a number of school boards actually require hunter safety as part of the school curriculum.

Hunter Safety became an individual section within the department in the '80s composed of five hunter education specialists, a full time secretary, plus a hunter safety coordinator. The need for an even further expanded safety program prompted Louisiana to adopt into law a mandatory requirement for anyone born on or after September 1, 1969 to satisfactorily complete a hunter education course before being issued a license. The Hunter Safety Section, with no additional professional assistance and an operating budget of $550,000, increased the number of students certified in 1985 (the year the new law became effective) over 1984 by more than 100%. It certified a total of 22,140 citizens as safe hunters in 1985 alone.

For one half century, citizens have seen the successes of wildlife and habitat programs that are designed by experts in the field and financed by active sportsmen–Louisiana's one half million hunters. Through their noteworthy contributions integrity is being restored to all that is wild in Louisiana.

Un-Endangered Species: A Wildlife Management Success

During the early 1900s, the future of many species of America's wildlife was in question. Destruction of habitat and commercial exploitation had reduced populations to critical levels. Sportsmen, through excise taxes and license fees, have shouldered the bill for restoration of many of these species. A little-known cooperative federal-state program known as "Federal Aid in Wildlife Restoration" has been the key. Here are a few of its many success stories.

Photograph by LuRay Parker, Wyoming Game and Fish

Bighorn Sheep–To hunters, photographers and naturalists, the bighorn sheep ram is symbolic of the wilderness. But, by the early part of this century its numbers had been reduced dramatically. Now, an estimated 40,000 plus roam the deserts and mountains of our western states.

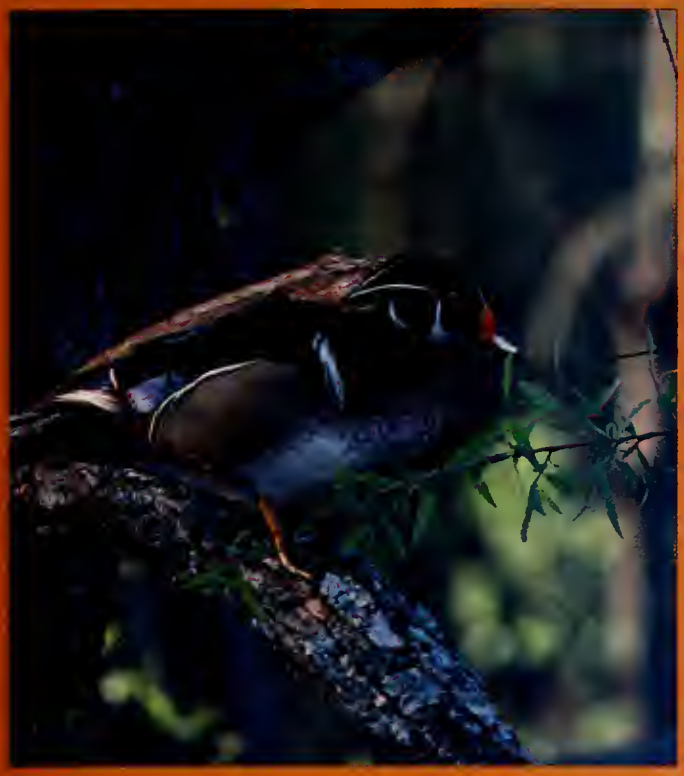
Rocky Mountain Elk–In 1907, only 41,000 elk could be counted anywhere in the United States. They were common only around Yellowstone National Park. Today, there are more than 500,000, with most western states having surplus populations which may be hunted during regulated seasons.

Photo Courtesy California Fish and Game

Sea Otter–The sea otter, a native of the west coast and Alaskan waters, was nearly extinct by 1907. Today, population estimates in Alaska and California total as high as 140,000 and they have been successfully reintroduced into Oregon, Washington and British Columbia.

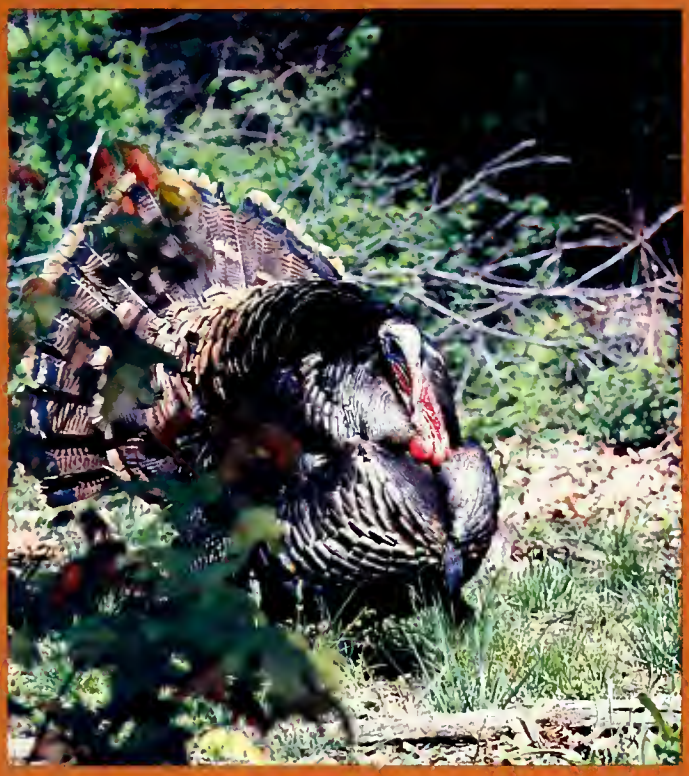
Photograph by LuRay Parker, Wyoming Game and Fish

Pronghorn Antelope–About 50 years ago, the total United States population of pronghorn antelope was less than 20,000. Today, habitat restoration and restocking programs have helped increase pronghorn populations to more than 700,000.



Photograph by Lloyd Poissenot

Wood Duck–The wood duck was nearly extinct in 1915. Today, the wood duck is the most common breeding waterfowl in the eastern U.S. and is number one among ducks taken by hunters in the Atlantic Flyway and number two in the Mississippi Flyway.



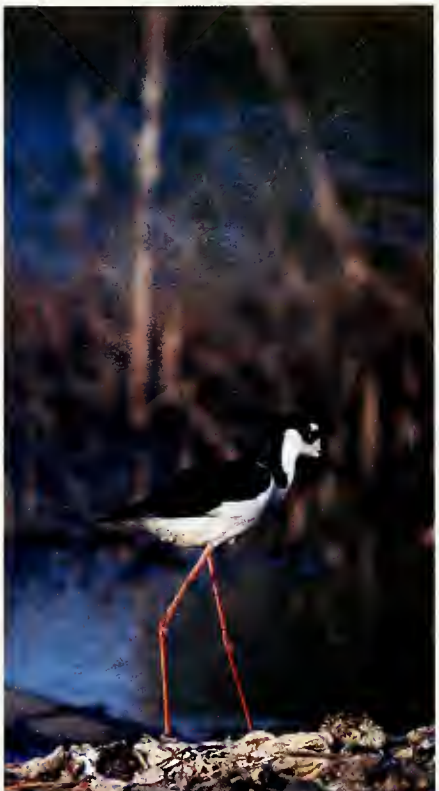
Photograph by Jim Rathert, Missouri Dept. of Conservation

Wild Turkey–While records of turkey populations during the early 1900s are vague, estimates are that populations had been reduced to 650,000 birds or less. Today, turkeys have been restored to healthy numbers in 41 states with a total population of some 2 million birds.

Photograph by Bill Ford

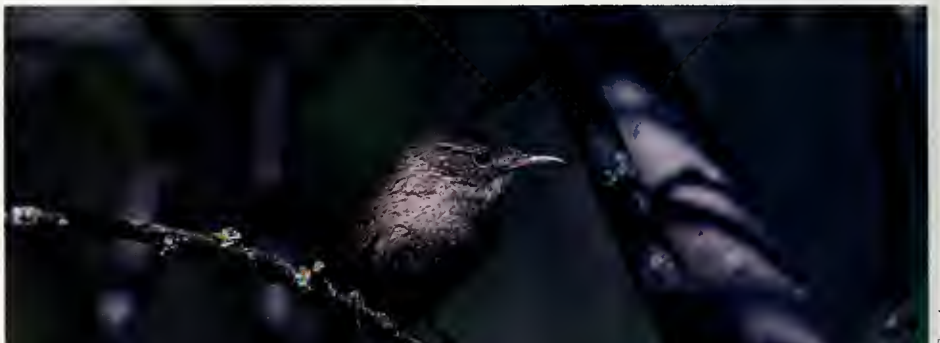
White-Tailed Deer–In 1900, an official U.S. survey estimated about 350,000 white-tailed deer remaining in the nation. Today, there are about 14 million. The Louisiana population alone now exceeds what only a few decades ago was the total for the entire United States.

Black Bear–Once hunted for bounty, black bear can today be found in only 30 of the 49 states they once inhabited. Now, with new research, ambitious habitat acquisition and improved management techniques, their future seems assured.



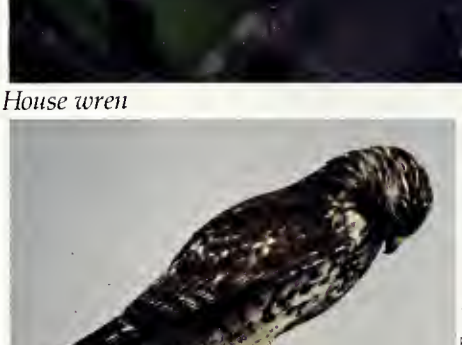
Photograph by Lloyd Poissenot

Black-necked stilt



Photograph by Dr. Jacob Faust

House wren



Photograph by Dr. Jacob Faust

Red-shouldered hawk

Photograph by Guy LaBranche

Brown thrasher

Focus on Nongame

Inevitably, management activities directed toward game species will have direct beneficial effects on many types of nongame animals as well.

By Loyd Mitchell
Acres for Wildlife Biologist

THE PITTMAN-ROBERTSON PROGRAM has been a positive force in the recovery and management of Louisiana game species since the program's beginnings in 1937. However, many people fail to recognize that a wide variety of nongame wildlife species also have benefited by P-R expenditures. Inevitably, management activities directed toward game species will have direct beneficial effects on many types of nongame animals as well.

The Department of Wildlife and Fisheries currently has approximately one million acres in its Wildlife Management Area system. The preservation and/or management of these lands have far reaching benefits to nongame species, especially when efforts are directed towards threatened and declining habitats such as bottomland hardwoods, upland hardwoods, and longleaf pine. For example, the department's Sicily Island Hills contains 1 of only 2 populations of the rare Ouachita red back salamander known to exist in Louisiana. Most of the lands and facilities in the WMA system have been managed and maintained by P-R expenditures.

Habitat management activities carried out on the department's WMA system by Game Division personnel serve to benefit a wide variety of mammals, songbirds, raptors, and shorebirds. Periodic timber thinning in bottomland hardwoods increases the vigor and crown size of remaining trees, which in turn benefits mast and fruit production on which many forest-dwelling animals depend at one time or another during the year. Also, the openings created by thinning allow for increased vegetative growth on the forest floor that provides habitat for rufous-sided towhees, white-throated sparrows, white-eyed vireos, and brown thrashers, to name

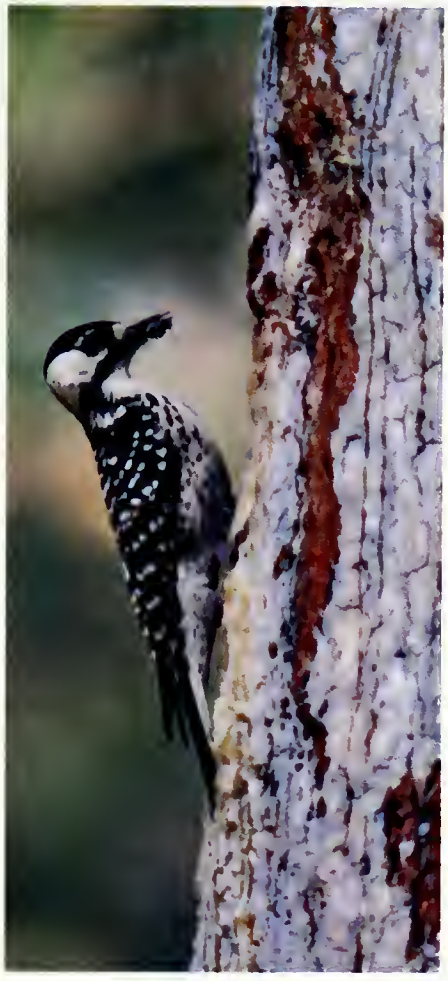
Painted bunting

Photograph by Dr. Jacob Faust

Yellow-rumped warbler

Photograph by Dr. Jacob Faust

Great horned owl



Photograph by Robert Murry

Red-cockaded woodpecker

a few. In pine habitat, prescribed burning maintains an early successional stage of grasses and low shrubs that provide habitat not only for bobwhites and turkey but also for red-cockaded woodpeckers, savannah sparrows, house wrens, and others. It also serves to perpetuate pineland wildflowers and pitcher plant bogs. On the other end of the spectrum, moist-soil management units provide feeding and loafing habitat for shorebirds and wading birds as well as waterfowl. These areas also generally support large numbers of small rodents and furbearers which in turn serve as prey for predators such as alligators and northern harriers.

Food plots and forest openings are maintained on many WMAs. They provide an abundance of edge and a variety of native and planted foods and feeding habitats. Without a doubt nongame wildlife utilization of these areas far exceeds that of game species, in terms of total numbers as well as number of species. Examples of nongame species benefiting from these practices include a variety of field mice, song sparrows, and chipping sparrows. Herbivores and granivores are not the only species to benefit from food plots and forest openings. High insect populations associated with the lush vegetation in the plots provide excellent bugging opportunities for eastern bluebirds, yellow-rumped warblers, phoebes, and a host of other insectivores.

Activities performed with P-R funds which affect nongame in Louisiana go beyond the WMAs. The department's Forestry Section reviews U.S. Forest Service forest management prescriptions and thereby has a potential impact on an additional 600,000 acres of pine uplands in Louisiana. Personnel, in the course of performing other activities, have often documented valuable information such as nesting activities of the bald eagle and the red-cockaded woodpecker or unusual sightings such as tundra swans and sandhill cranes.

Although it is evident that the Pittman-Robertson program has done much toward the overall conservation of Louisiana's nongame wildlife resource, there is much more to be done. Projects of the Louisiana Natural Heritage and Nongame Wildlife programs are in the process of being developed to address the specific needs and problems of certain unique and/or rare wildlife species and habitats across the state. And, projects are already underway to publish a new book on Louisiana's endangered species, create an inventory of the state's nongame wildlife, and prepare bird lists for wildlife management areas and refuges. Citizens of Louisiana can do their part by contributing all or part of their 1986 Louisiana income tax return to the Nongame Wildlife Program. Funds collected in this manner are the sole source of monies for the program and, more importantly, are dedicated to be spent on nongame wildlife activities. So, look for the "Wildlife Protection Fund" donation line on your 1986 Louisiana income tax form and make a wild investment.

A Few Bucks More...

Photograph by Bill Ford

by Jerry Farrar,
Deer Study Leader
and Maurice N. Cockerham

Pittman-Robertson funds have enabled Louisiana's wildlife managers to build a white-tailed deer herd far larger than that available to the pioneers in "the good old days."

THERE IS A STRANGE FANTASY common to far too many Louisiana residents, both within and without the sporting fraternity. Basically, the fantasy conjures a mental image of a primitive Louisiana covered with towering virgin pine and hardwood forests (except for the coastal marshes, of course) and literally teeming with *Odocoileus virginianus*...the white-tailed deer.

According to this imaginary figment, the "noble savage" carefully and deliberately nurtured and conserved the deer, harvesting only what was necessary to survival. Then the wanton white man showed up, laying waste to the land and indiscriminately slaughtering the game until the white-tailed deer virtually disappeared.

It is a neat little package and fits nicely into the current American proclivity for self-flagellation and guilt trips. Unfortunately, like most fantasies, this daydream contains a mixture of fact and fallacy.

Truth is, the early settlers did not find a solidly forested territory crawling with deer. Oh yes, there were deer to be had. In some areas there was a fair abundance. The numbers of deer killed by the Indians was limited only by their primitive hunting tools, but it is true that they utilized their kill "teeth, hair, hide and horns," as the saying goes. In many other areas, however, there were few or no deer to be found.

Many massive areas of what is now Louisiana, in addition to the well known prairies of southwest Louisiana, were given over to open meadows. It simply was not productive deer habitat.

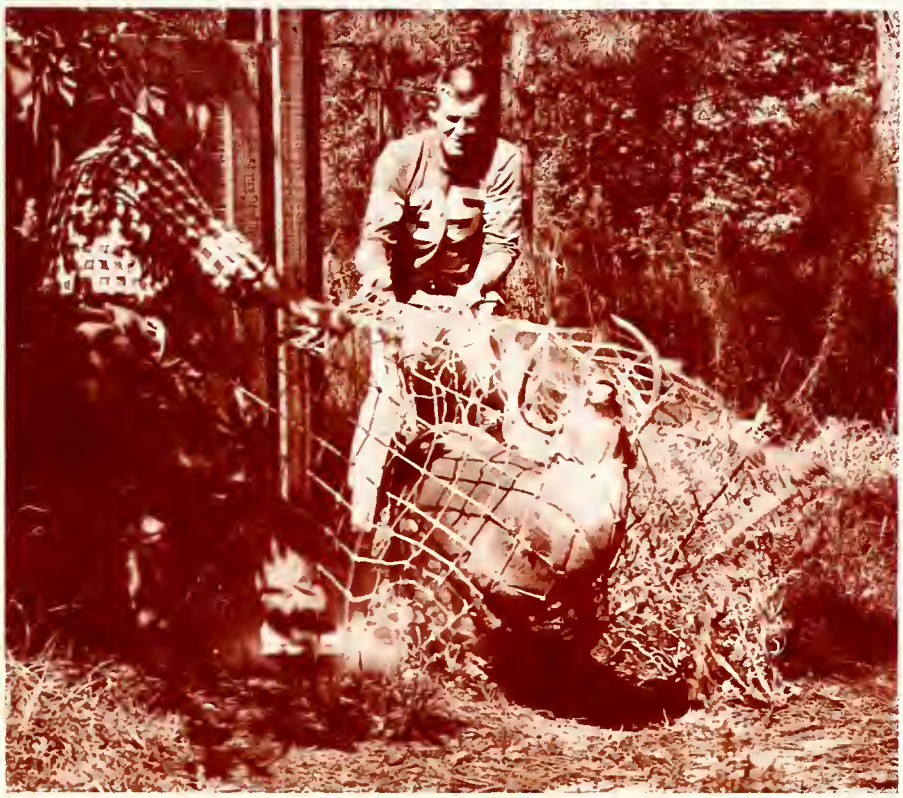
The bottomlands of the Mississippi and other major rivers were covered with a dense growth of mature hardwoods combined with an almost impassable understory of switch cane and palmetto. In the lower regions of the state, the hardwoods gave way to similarly mature stands of cypress and tupelo. All of these bottomlands flooded regularly. With the "umbrella effect" of the mature forest shading out the shrubs and forbs necessary to deer production, and the spring flooding impeding reproductive success, neither type of forest provided good deer range.

A solid park-like stand of mature pines covered much of central, west central and southwest Louisiana. Once again, a mature forest canopy and poor sandy soils provided meager support for sparse deer populations.

The hill lands of northwestern Louisiana, on the other hand, were clothed in a mixed pine-hardwood cloak. Creek and stream bottoms were grown up in smaller mast producing hardwoods and, although the forest floor has been described as park-like, some early authors noted that it was well supplied with shrubbery and other game foods. It was predominantly in this northwestern quadrant that the early pioneer found "abundant" deer.

We must also be mindful that, until the 1800s, the human population of Louisiana was quite sparse and confined to a few trading posts and settlements. A few dozen, or even a few hundred, souls did not require massive deer herds to represent "abundance."

Following the Civil War, the land and its game was subjected to massive changes. Indiscriminate "cut out and get out" logging laid waste to great stretches of forest in the final decades of the 1800s. The years from 1880 until 1925 have been described as the period when Louisiana "emerged from the wilderness," and a lot of that "progress" was far from pretty. Much of the choice pine-hardwood game range was stripped and burned. The timber throughout the state was gobbled up by a growing nation and the denuded land was converted to agriculture. This was also the heyday of the controver-



Photograph by Bob Dennie

Despite widespread rumors about the size of a few deer imported from other states, biologists managed to trap some real "warhorse" types from native Louisiana herds. Bucks such as the one in the top photo were relieved of their antlers and then relocated to sire future generations of deer across the state. During one of the marsh area "round-ups," (bottom), deer are weighed and checked by biologists after being captured by airboat crews.

sial "market hunter," a much-maligned, greatly misunderstood and often misrepresented figure whose activity must, nonetheless, be considered in combination with rapidly increasing numbers of sport hunters.

By the 1920s and '30s, the combination of population growth, intensive logging, conversion of forest land to agriculture and constant, unregulated hunting had wreaked disaster on the state's deer herds. The few remaining deer were to be found only in remote swamps and a few relatively inaccessible backwoods areas.

By the time the Pittman-Robertson Act was signed by President Roosevelt in 1937, Louisiana's deer population had already begun a painfully slow recovery. Second growth timber was reclaiming many previously denuded areas and numerous abandoned homesteads. Hand in hand with the "second growth" timber came lush understory growth, providing abundant food and cover for deer.

At the same time, a few concerned conservationists had forced the enactment of game laws, the abolishment of market hunting, and the creation of a meager force of game wardens.

The time was perfect for the re-creation of a white-tailed deer herd in Louisiana far in excess of anything experienced by the pioneers or Indians of early Louisiana.

Unfortunately, a mad Austrian named Adolf Hitler picked this decade to lead the world into global conflict. Conservation went on hold.

In 1948, the Louisiana Wildlife and Fisheries Commission inaugurated its deer restocking program. The boys were home from "over there" to supply the human resource and the Pittman-Robertson fund was growing steadily to supply the financial resource. It was indeed a propitious moment.

Much of the state now sported lush second-growth habitat with great potential. The deer, however, were simply not there. The remaining herds were generally confined to a few bottomland hardwood parishes in northeastern Louisiana, the depths of the Manchac Swamp in southeast Louisiana and the lower Atchafalaya Basin.

Existing deer herds had already begun a slow, natural recovery from the turn-of-the-century devastation, yet less than 15 percent of the state was open to hunting and the annual legal kill was estimated at less than a thousand animals.

A plan was set in motion by the Louisiana Wildlife and Fisheries Commission to trap white-tailed deer and relocate "seed stock" to create new herds in selected areas.

The early efforts at rejuvenating Louisiana's deer herds met with varying degrees of success. The deer trapping crews tried placing corn laced with tranquilizer drugs in the woods. Too much trouble with controlling dosages.

Early-model "dart guns" were brought to Louisiana immediately after their development in Georgia. They worked, but it was slow, labor intensive work.

A few deer were even imported into Louisiana from Wisconsin, giving rise to a myth that has yet to die. Campfire tales abound of the "big blue deer from Wisconsin." Wildlife and Fisheries veterans recall that the Wisconsin deer were weighed prior to release and "we were catching bigger deer right here in Louisiana."

Through it all, Pittman-Robertson funds fueled the effort and the field crews continued to acquire valuable experience and knowledge.

The program finally settled around capturing native deer with semi-

Photograph by Joe Herring

At the completion of the program, more than three thousand deer had been captured and set free at 96 sites throughout the state. The program, financed throughout by license sales to sportsmen and Pittman-Robertson funds generated by sportsmen, entailed hard work but was richly rewarding. Within only a few short years, the deer stocking program made successful deer hunting a reality throughout much of Louisiana. The state's deer population was to increase from an estimated five thousand to about half-a-million between 1948 and 1986.

permanent wooden traps placed in areas with healthy deer populations. In a few cases, deer in the coastal marsh areas were rounded up cowboy-style with airboats. The captured deer were then transported throughout the state and released to form the nucleus of new deer herds.

The results were simply stunning. At the conclusion of the deer stocking program in 1969, a total of 3,025 deer had been released at 96 locations throughout the state. As the herds prospered, hunting seasons were established where virtually no deer had existed for a generation, if ever.

The annual legal kill rose from less than one thousand in the 1920s to about 5,000 in the early '50s. By 1960, that figure had climbed to 16,500.

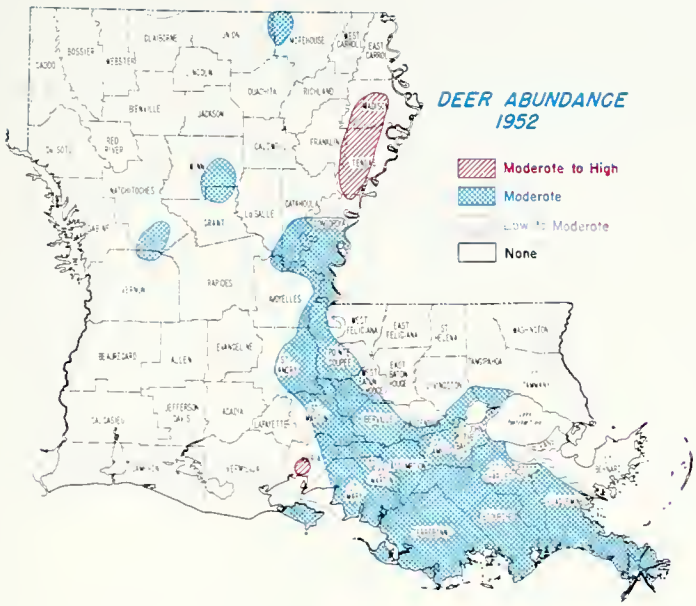
At present, professional biologists and wildlife managers of the Louisiana Department of Wildlife and Fisheries note that viable deer herds are thriving in every quadrant of the state and that ninety five percent of the state enjoys an annual deer hunting season.

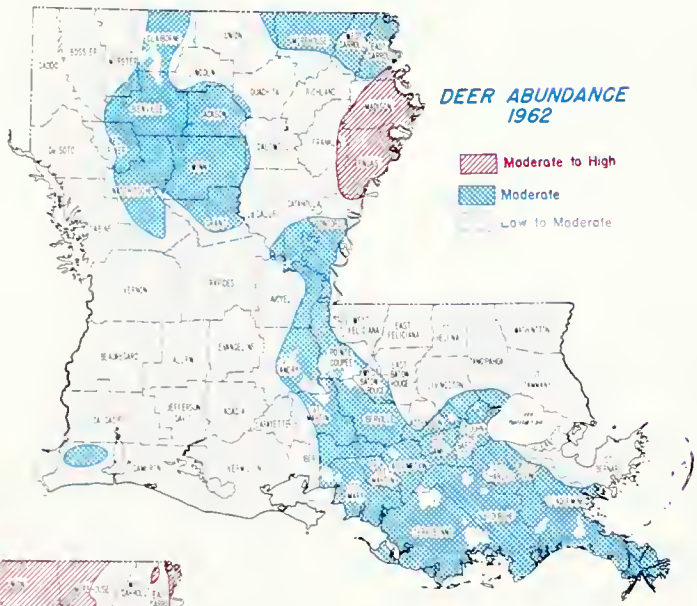
The statewide deer population is presently pegged at half-a-million animals, with an annual legal kill of some 120,000. An estimated 200,000 hunters now enjoy pursuing white-tailed deer with a remarkable opportunity for success. Their purchases of firearms, ammunition and other sporting equipment continue to bolster the Pittman-Robertson coffers, providing the vital funds to enrich the outdoor experience for all Americans, both hunters and non-hunters alike.

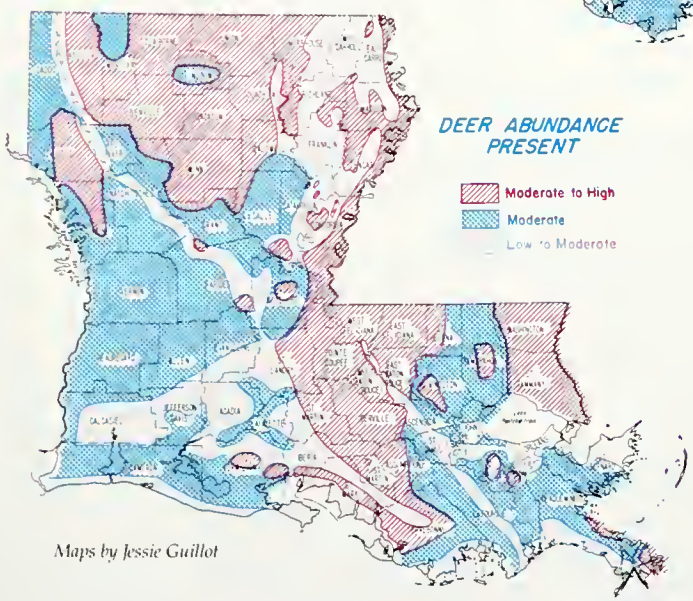
The sport of deer hunting now contributes an estimated sixty million dollars each year to the state's economy. Using a modest three-to-one "turnover" factor, the total ecomonic impact nears a quarter of a billion dollars. That is exclusive of aesthetic and non-consumptive values.

The Deer Stocking Program has culminated in almost unbelievable success and Louisiana's share of Pittman-Robertson funds are now used, in part, to fund professional management of our thriving white-tailed deer herds.

In terms of sheer abundance of white-tailed deer, neither the Pilgrims nor the Indians ever saw anything like it. But then, they did not have Pittman-Robertson.







Maps by Jessie Guillot

Gobblers–Once a Rarity!

by Danny Timmer,
Turkey Study Leader
and Maurice N. Cockerham

"By 1946, inventories indicated an all time low of 1,463 wild turkeys in the entire state...The likelihood of extirpation (extinction) was very real."

THE WILD TURKEY (*Meleagris gallopavo silvestris*) once roamed in great abundance across the sparsely populated landscape of a rural and unspoiled Louisiana. Those knowledgeable of such things estimate that more than a million of the magnificent birds once populated about 40 of the state's 64 parishes.

By the turn of the century, however, the timber industry was running rampant. Thousands upon thousands of acres of towering mature forest, productive wild turkey habitat, were put to the saw and the axe. In many instances, the torn and ravaged understory was burned off.

Then too, a rapidly mechanized and modernized agricultural industry greedily gobbled up acreage to be put to the plow or cleared for livestock grazing.

Other factors complicated the situation. Until the turn of the century, wild turkeys were hunted year 'round and without regulation. There were no bag limits and such deadly tactics as baiting with grain were common.

The first regulations concerning turkey hunting were laughable. The first "season" was established in 1902 and ran from November 1 through March 31. There was no bag limit of any kind. In 1905, a gobblers-only regulation went into effect. There was no meaningful enforcement and precious few nimrods paid any attention. Even if they had, the regulation contained a legal bag limit of 25 GOBBLERS PER DAY.

Photograph by Joe Herring

Proper use of a cannon net is not a simple matter. In photo at top, Wildlife and Fisheries employees lay out an early net at selected trapping site. It must be free of tangles and carefully "accordion folded." The birds in bottom photo were being released on Russell Sage Wildlife Management Area near Monroe and represented the first turkeys to inhabit that area in more than 25 years.

At the end of World War I, the wild turkey was in very serious trouble in Louisiana. In 1933, turkey hunting was entirely prohibited by law. Once again, there was pitifully little enforcement, habitat destruction continued without pause, and the state's turkey population continued to decline.

A few plaintive, largely unheeded voices had been warning since the turn of the century that disaster was looming on the horizon. By the fourth decade of this century, the prophecies were very nearly fulfilled. In 1941, the Louisiana Wildlife and Fisheries Commission drew upon the newly-created Pittman-Robertson Act to fund the state's first turkey research project. In 1942, the wild turkey population was pegged at 1,738 birds and declining. By 1946, inventories indicated an all time low of 1,463 wild turkeys in the entire state. These were concentrated in only three areas: the Florida Parishes of southeast Louisiana and the Tensas Basin and Quachita River bottom of northeast Louisiana. The likelihood of extirpation (extinction) was very real.

By 1948, the manpower ranks of the Wildlife and Fisheries Commission were being strengthened with veterans returning from the second world war. At the same moment, the Pittman-Robertson fund was growing rapidly as those former servicemen turned passionately to outdoor sports and purchased sporting arms, ammunition and other outdoor equipment.

In that year, the state turned some of its increasing license-sale revenue to a turkey restoration project. The state's matching funds made possible substantial Pittman-Robertson allocations and the effort was underway to head-off the disappearance of the wild turkey in Louisiana.

Initial efforts were disheartening. Some 5,000 wild turkeys, hatched and reared in captivity, were released between 1949 and 1953. All indications are that those releases served only to feed foxes, bobcats and other predators. It was soon discovered that wild turkeys are far too susceptible to domestication. Reared in pens, they immediately surrender the ability to survive in the wild.

In addition, some reports indicate that native wild turkeys were being eliminated by diseases carried by the pen raised birds.

The turning point was reached in the early 1960s. Research and field experience had demonstrated that the only viable source of birds for restocking lay with trapping and relocating native wild birds from healthy, breeding flocks. Additionally, the so-called cannon net had been developed and proved to be far superior to any previous method of trapping wild birds.

An additional benefit had been realized in the previous decade as the urbanization of Louisiana saw many farms and homesteads abandoned. These were quickly reclaimed by nature, expanding the habitat available for stocking.

During the decade of the '60s, a total of 1,504 genetically pure turkeys, trapped from wild flocks, were released in 82 locations in 41 par-

Photograph by Dave Moreland

The cannon net must be fired when the majority of birds have their heads down. Birds with their heads up are likely to escape in the fraction of a second required for the net to extend fully.

These captured birds join the 100 plus wild turkeys trapped from native Louisiana flocks each year and relocated to areas sporting suitable habitat and protection but few or no turkeys.

ishes. Some of the releases were failures due to unanticipated changes in the available habitat or to the actions of ever-present criminal poachers. Others, however, responded strongly to sufficient habitat and local public protection and support for game law enforcement. Some of these new flocks were soon providing "seed" stocks for additional releases.

Through the '60s and '70s, into the '80s, and for the foreseeable future, the rich mixture of state and Pittman-Robertson funds, generated by the license and equipment purchases of Louisiana sportsmen, continues to support the ongoing Turkey Restoration Program. Although the state's turkey population will never again equal turn-of-the-century numbers, almost all of the state's existing wild turkey habitat now supports healthy if not huntable turkey flocks.

Thanks to the efforts of a few farsighted sportsmen-conservationists a half-century ago, resulting in the passage of the Pittman-Robertson Act, more than three thousand wild turkeys have been stocked in 40 parishes. Due to increasing public support for sound game management and strong game law enforcement, the wild turkey has increased in number to the point that strictly controlled, gobblers-only hunting is now possible in 45 parishes.

At present, the statewide population of wild turkeys is estimated at 25,000 birds. Each spring, some 20,000 hunters take to the woods in pursuit of one of the grandest game birds in America. In all, they will devote more than 100,000 hunter-days to bag about 4,000 gobblers. They will also generate an economic impact of some 1.75 million dollars in the state's economy. Part of that will represent purchases of guns, ammunition and outdoor equipment. They will be providing more funds for Pittman-Robertson, and Pittman-Robertson will continue to provide the funds to restore and protect the wild turkey in Louisiana.

Photograph by Guy LaBranche

Totally enclosed cartons reduce stress and injury during transport. Released in its new home, this wild turkey will add to the success of Louisiana's turkey restoration efforts that have seen the magnificent wild turkey rebound from an all time low of just over a thousand to an estimated 25,000 birds.

Conservationotes

Award-winning conservation leaders get together. Seated (from left) are Cornel J. Arceneaux of the Gulf Coast Conservation Association, Harold Schoeffler and William H. Herke. Standing are Gerald J. Bertinot Jr., Eddie Castelin, Robert C. Joslin and Ben J. Bagert Jr. Not pictured are Robert A. Thomas and Dave Tullos.

Herke Gets Top Award

One of Louisiana's most coveted distinctions, Conservationist of the Year, has been conferred upon William H. Herke. Adjunct professor of fisheries at Louisiana State University, Herke is assistant leader of the Louisiana Cooperative Fish and Wildlife Research Unit.

He was presented the Governor's Award, a statuette of a bald eagle that goes with his new title, at the 48th convention of the Louisiana Wildlife Federation, held in Alexandria in February.

Six other award recipients also were named under the 23nd annual Governor's State Conservation Achievement program, sponsored by Sears, Roebuck & Co. and conducted by LWF.

Herke's innovative outlook on marsh management has produced goundbreaking research. His scientific contributions include a new approach to solving the complex problem of protecting Louisiana's eroding coastline while maintaining the productivity of the precious marine resources therein.

Herke has held the positions of Fellow of the American Institute of Fisheries Biologists and president of the Louisiana chapter of the American Fisheries Society, among others. Other award winners include:

Robert C. Joslin, Professional Conservationist of the Year. As supervisor of Kisatchie National Forest Joslin developed history making forest management plans that prioritize the support of wildlife.

Harold Schoeffler, Nonprofessional Conservationist of the Year. This Lafayette businessman, long respected for his leadership in citizen conservation organizations, headed the effort to protect paddle fish from exploitation by caviar marketers.

Robert A. Thomas, Conservation Educator of the Year. Executive director of the Louisiana Nature and Science Center, Thomas most recently spearheaded a far reaching program on wildflower conservation and was a key negotiator in the successful effort to create the Bayou Sauvage Urban Wildlife Refuge in Orleans Parish.

Ben J. Bagert, Jr., Conservationist of the Year–Elected Official. In the 1986 legislative session the senator from New Orleans successfully guided into law controversial legislation protecting the state's threatened redfish and speckled trout populations.

Eddie Castelin, Conservation Communicator of the Year. Well known angler and radio personality, he hosts WWL's popular Outdoor Show that features fair and objective coverage of the conservation issues via invitation to guest experts of divergent views.

Gulf Coast Conservation Association of Louisiana, Conservation Organization of the Year. Responsible for creating a statewide network of volunteers to contact elected officials and encourage them to adopt legislation to conserve coastal fisheries resources, particularly redfish.

Lieutenant Dave Tullos of the Louisiana Department of Wildlife and Fisheries and Gerald J. Bertinot, Jr., assistant federal prosecutor for southwest Louisiana, were presented with special achievement awards for outstanding accomplishment in enforcing fish and wildlife law.

Writers Win Laurels

Two articles that appeared in the Louisiana Conservationist last year have been singled out for awards by the Louisiana Wildlife Biologists Association.

The winner in the general conservation category of LWBA's annual writing competition was "Rigs to Reefs," by Villere Reggio, Virginia Van Sickle and Charles Wilson. The article was featured in the Conservationist's January/February 1986 issue.

In the popular category, the winner was "Alligators: Louisiana's Newest Glamour Crop," by Bob Sheldon and Ted Joanen. It was in the November/December issue.

Certificates were presented to the authors at the 48th convention of the Louisiana Wildlife Federation in Alexandria.

Joanen Singled Out

Out of all of the employees within 16 wildlife and fisheries departments, the Southeastern Association of Fish and Wildlife Agencies selects one person to recognize with the C.W. Watson Award. In fact, this is the sole achievement award given by the association.

At this year's banquet, Missouri Director Larry Gale presented the prestigious honor for outstanding achievement in conservation work in this region to Ted Joanen. Alligator authority and leading researcher for the Fur and Refuge Division of the Louisiana Department of Wildlife and Fisheries, Joanen is stationed at the Rockefeller Wildlife Refuge.

Maumus Claverie Jr. (left) of New Orleans receives Arthur Van Pelt Award for conservation activities from Dick Davis of the Louisiana Outdoor Writers Association.

Writers Cite Claverie

Maumus Claverie, Jr., New Orleans attorney and avid recreational angler, has been honored by the Louisiana Outdoor Writers Association for his life long commitment to conservation in the field of marine fisheries resources.

Claverie received LOWA's Arthur Van Pelt Award at the annual meeting of the Louisiana Wildlife Federation in Alexandria.

He has participated for many years on local, state and federal levels on a wide range of conservation issues. The long list of his credentials include member of the Gulf of Mexico Fisheries Management Council, Governor's Finfish Task Force, Advisory Commission to the International Council for the Conservation of Tunas and director of the Gulf Coast Conservation Association of Louisiana.

Angler Randy Dubuc of Opelousas was the recipient of LOWA's Fish of the Year Award. He landed a four pound, two ounce white bass in a private pond near his home.

Pol Joins Commission

Warren I. Pol of Baton Rouge has been seated on the Louisiana Wildife and Fisheries Commission following his appointment by Gov. Edwin W. Edwards to a six-year term.

Pol, 66, succeeds George N. Gray of Shreveport, whose term expired.

A mechnical contractor, Pol is chairman of the board of Airtrol, Inc. He is a graduate of Syracuse University and a Navy veteran of World War II. He is an enthusiastic hunter and fisherman.

Patti Chairs G.S.M.F.C.

One of Louisiana's representatives on the Gulf States Marine Fisheries Commission was recently elected chairman of that group.

State Representative Frank Patti of Belle Chase, Louisiana brings considerable knowledge and experience in fisheries and environmental issues to the chairmanship of the commission. He is a long-time member of the House Natural Resources Committee and has served on numerous special task forces and study groups dealing with marine issues.

The commission is comprised of three representatives from each of the five northern Gulf of Mexico states. The head of each state's marine fisheries department is given automatic membership. In addition, a state legislator from a coastal parish and a private citizen knowledgable of and interested in marine fisheries are appointed by the governor, the latter with the advice and consent of the state senate.

Florida, Alabama, Mississippi, Louisiana and Texas formed the commission in 1949 to promote and enhance development and conservation of the extremely valuable fisheries resources in the Gulf.

At present, the waters of the five member states produce about 75% of the nation's shrimp, 60% of the nation's oysters and 40% of the nation's finfish. In addition, an estimated four million sport fishermen enjoy the recreational benefits of the Gulf waters each year.

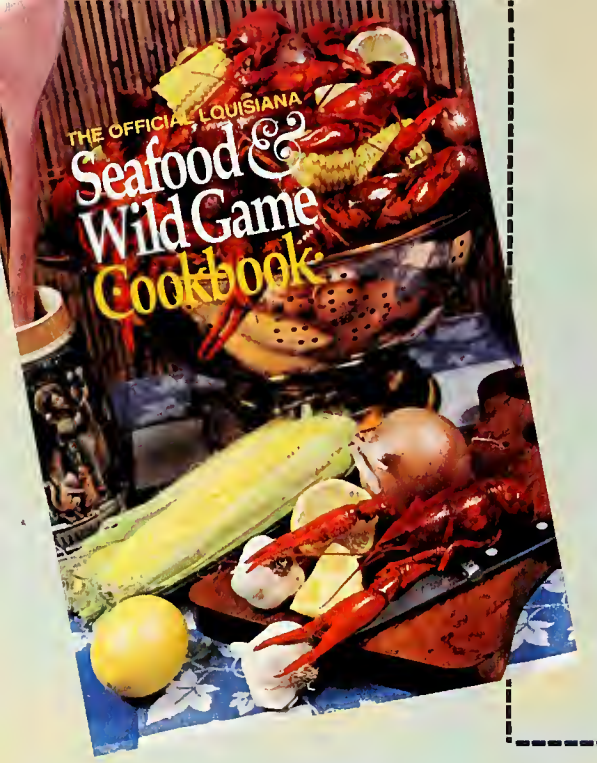
The general goals of the commission are: 1) to further cooperation between the states; 2) to improve public education in fishery matters; 3) to sponsor joint studies of particular interest; and 4) to encourage uniform legislation for fisheries of common concern. While the commission has no regulatory powers, fishery management recommendations are made to the governors and legislatures of member states. In addition, the commission advises and testifies before the U.S. Congress on legislation that may affect the Gulf states and their respective fisheries.

The commission has been a leader in coordinating marine fisheries research among the Gulf states. A prime example of this was the Cooperative Gulf of Mexico Estuarine Inventory. The Louisiana portion of this report, published in 1971, was the first comprehensive survey of marine fisheries resources in Louisiana's inshore waters ever conducted.

Recently, a special work group of the commission initiated the "State-Federal Cooperative Program for Red Drum Research in the Gulf of Mexico." The purpose of this program is to ensure that voids in scientific data of red drum are filled as quickly and effectively as possible. Once this is done, the commission's role will be to assimilate the information and recommend management actions to the appropriate agencies.

Louisiana's other members on the commission are William S. "Corky" Perret, representing the Department of Wildlife and Fisheries Office of Coastal and Marine Resources and Leroy "Tom" Kiffe of Golden Meadow, a commercial fisherman and private businessman.

Shown at recent meeting of Gulf States Marine Fisheries Commission are from left: Louisiana representatives, William S. "Corky" Perret, representating the Department of Wildlife and Fisheries, Representative Frank Patti of Belle Chase, the new commission chairman and Leroy "Tom" Kiffe, Golden Meadow commercial fisherman and businessman. Outgoing chairman, Representative Cylde Richbourg of Florida, is at right.



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Bayou Kitchen

by Wayne Miller

Photograph by Guy LaBranche

Turkey Wellington

Prepared pastry dough

2 lbs. ground turkey
1/3 cup olive oil
2 cups mushrooms, finely chopped
1 cup onion, finely chopped
1/2 cup celery, finely chopped
1/2 cup green onion, finely chopped
1 toe garlic, finely chopped
1 tbs. parsley, minced
1/8 tsp. cayenne pepper
1/4 tsp. black pepper
1 1/2 tbs. Worchestershire sauce
1 1/2 tsp. salt
2 eggs, slightly beaten
1/3 cup dry sherry
1 1/2 cups seasoned bread crumbs

Preheat oven to 350°. Sauté onion, celery and garlic in olive oil until onion begins to turn transparent, add parsley and mushrooms and cook two minutes more. Mix with turkey and other ingredients and adjust moisture if necessary by adding additional bread crumbs. Shape into loaf and arrange pastry strips in lattice pattern on top. Bake for approximately 45 minutes or until pastry is rich brown. Serve turkey loaf surrounded with peach halves filled with whole cranberry sauce and a selection of steamed vegetables.

Veal with Madeira and Mushrooms

4 veal scallops, 2 ounces each
Flour for dusting
2 tablespoons peanut oil
1 tablespoon green onion, minced
1 small clove garlic, minced
3 mushrooms, quartered
1/4 cup dry Madeira
1/4 cup chicken stock
2 teaspoons butter, chilled
1/4 teaspoon thyme
1 tablespoon parsley, minced
Salt and pepper

Lightly pound the veal between waxed paper until uniform and thin. Dredge in flour and shake off excess. Heat the oil very hot and quickly brown the veal on both sides, about a minute per side. Remove and keep warm. Pour off all but a teaspoon or so of the oil. Reduce heat and add the onion, garlic and mushrooms. Cook and toss or stir for 3 minutes and add the Madeira and stock. Reduce by two-thirds over high heat. Off the heat, swirl in the butter, a bit at a time to thicken the sauce. Add the herbs and pour over veal. Serves two.

Eggplant Gratin

One 2-pound eggplant, cut into slices 3 inches in diameter and 1/2 inch thick
1/2 cup mayonnaise
3/4 cup crushed saltine crackers
3/4 cup grated Parmesan cheese

Preheat oven to 425°. Coat both sides of eggplant slices lightly with mayonnaise. Combine crackers and cheese and dip eggplant slices into mixture. Place on greased cookie sheets and bake for 15 minutes. Turn and bake 5 minutes more, or until golden brown.

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